



OECD GLOBAL CONFERENCE

ENHANCING THE ROLE OF SMALL & MEDIUM SIZED  
ENTERPRISES (SMEs) IN GLOBAL VALUE CHAINS

ENPRIS Presentation:  
Intangible Assets and IPR Management

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## Introduction

This Presentation will feature 3 case studies on Australian SMEs that have leveraged their intellectual property in expanding their business, namely:

**Aeris Technologies:** A case study illustrating how Aeris Technologies has successfully used IP in the Australian market.

**EvoGenix:** A case study illustrating how EvoGenix has successfully used IP in accessing the International market.

**Pharmaxis:** A case study illustrating how Pharmaxis has successfully used IP in raising finance.

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## What is Intellectual Property?

WIPO refers to Intellectual Property (“IP”) as;

*“Intellectual property refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce”*

From the commercial or valuation perspective, IP will typically include:

- Trademarks
- Know-how
- Patents
- Copyright
- Designs

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# AERIS TECHNOLOGIES

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## Aeris Technologies

Aeris Technologies (ASX:AEI) is an Australian company that provides a range of biological solutions that remove and provide protection against environmental contaminants in water, air-conditioning and refrigeration systems.

Australian customers include BHP Billiton, Westfield and Red Rooster. Distribution agreements with world's leading commercial air-conditioning corporation (Trane) and global diversified technology company (3M).

Operating Revenues for FY 2006: \$A0.78 million

Market Capitalisation: \$A53 million (at 30 March 2007)

IP focus on Patent portfolio, Know-how and Trade marks.

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# Aeris Technologies

## INTELLECTUAL PROPERTY PORTFOLIO

**Patents:** A number of patents covering a range of technologies including biofilm resistant polymer complexes and multi-enzyme water treatment products.

**Know-how:** Embedded, for instance, within customer contracts, regulatory approvals, proprietary R&D, collaborative research projects (for instance with CSIRO) and the application of the technology process (complementary to existing patents).

**Trademarks:** Mix of protection through registration and in-use trade marks, such as Aeris™ and AerisGuard™ (treatment system to protect against mould).

**Copyright:** Not identified. Copyright will exist in law in databases, etc.

**Designs:** None registered

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# Aeris Technologies

## IPRs - ACCESSING THE AUSTRALIAN MARKET

Example 1: BHP Billiton (Water)

**Patents/Know-how:** Investment in validation studies (e.g. BHP Billiton coal mine/Orica groundwater treatment plant in Australia), R&D and patents regarding the Company's Multi-Enzyme technology.

**Patents/Know-how:** Exclusive supply contract with BHP Billiton to provide its patented Multi-Enzyme Biofilm Removal technology and related services for the first of BHP's large coal mines.

**Trademarks:** Value generation through pilot and commercial contracts with BHP Billiton.

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# Aeris Technologies

## IPRs - ACCESSING THE AUSTRALIAN MARKET

### Example 2: Golden State Foods (Refrigeration)

**Trademarks:** Marketing of stand-alone division - Aeris Hygiene Services (AHS), which specializes in the remediation and protection of refrigeration systems in cold storage facilities.

**Know-how:** AerisGuard products have received approval from the Therapeutic Goods Administration (TGA) and the Australian Quarantine and Inspection Service (AQIS) allowing work to be carried out in the cold storage facilities in the meat, fish and poultry sectors.

**Know-how:** 6-month re-treatment at one of its key accounts, Golden State Foods Australia. The re-treatment was requested by GSF management after the initial treatment by AerisGuard successfully demonstrated significant efficiency and hygiene improvements to their refrigeration system.

**Trademarks:** Value generation through commercial contracts with Golden State Foods.

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# Aeris Technologies

## SUMMARY - HOW HAVE THE IPRs BEEN UTILISED?

The Company has been able to communicate the value of its IPRs in accessing domestic customers across different product lines.

The Company has been able to build and demonstrate a layer of proprietary protection and barriers to entry via its IPRs.

The Company has been able to utilize its IPRs to further develop its product pipeline to meet current and expected domestic demand for its products and services.

The Company has been able to utilize its IPRs to enhance its brand positioning and recognition in the market, via both business line identification and emanating from key customer recognition.

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# EVOGENIX

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## EvoGenix

EvoGenix (ASX:EGX) is an Australian company that integrates technologies to develop novel antibody therapeutics for world markets. The company applies its proprietary antibody-engineering platforms for humanisation and optimisation to develop therapeutic antibodies against clinically validated drug targets.

Australian and International customers, partners and suppliers include GlaxoSmithKline, CSL, US National Institutes of Health (NIH) and University of Massachusetts Medical School through mix of out-licensing and in-licensing.

Operating Revenues for FY 2006: \$A0.44 million

Market Capitalisation: \$A118 million (at 30 March 2007). Currently undertaking a proposed Scheme of Arrangement with Peptech for \$A156 million.

Business strategy built around Patent portfolio. IP Focus also on application of Know-how and Trade marks.

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# EvoGenix

## INTELLECTUAL PROPERTY PORTFOLIO

**Patents:** A number of patents focusing on a range of technologies around EvoGenix' process of converting mouse antibodies to equivalent human antibodies, and the optimisation of these antibodies for human use.

**Know-how:** Embedded, for instance, within collaboration partnerships, proprietary R&D and derivative processes (e.g the application of the know-how in the optimisation process) complementary to the Company's patent portfolio.

**Trademarks:** Mix of protection through registration and in-use trade marks, namely; Superhumanisation™ (conversion of a mouse antibody into a "humanised" form), EvoGene™ (process of improving attachment to the target) and Evibodies™ (binding entities).

**Copyright:** Databases, manuals, etc

**Designs:** None registered

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## EvoGenix

### IPRs - ACCESSING THE INTERNATIONAL MARKET

#### Example 1: GlaxoSmithKline (GSK) (Optimisation)

**Patents/Know-how:** Research and Collaboration Agreement with GlaxoSmithKline (GSK) to apply EvoGenix's proprietary EvoGene™ technology to the optimisation of selected compounds from GSK's product pipeline.

**Patents/Know-how:** Trigger of milestone payment to EvoGenix from GlaxoSmithKline after successful completion of the first project. The protein variants generated had improvements in affinity (the compatibility between an antigen and an antibody) that exceeded the goal specified in the collaboration agreement. GSK will be responsible for further development of the product, with EvoGenix eligible to receive additional milestone payments as the product progresses through the pipeline. EvoGenix is set to earn royalties on product sales should it be approved and launched.

**Trademarks:** Value generation through collaboration contract and achievement of milestones with GlaxoSmithKline.

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## EvoGenix

### IPRs - ACCESSING THE INTERNATIONAL MARKET

#### Example 2: University of Massachusetts Medical School (Humanisation)

**Patents/Know-how:** In-licensing agreement for the development of an anti-cancer antibody with the University of Massachusetts Medical School (UMMS). Application of EvoGenix proprietary technologies to advance the antibody to the stage where it can be tested in patients, humanising the antibody to eliminate rejection and optimising its cancer killing activity.

**Patents/Know-how:** Utilization of the Company's IP to access (via the UMMS licensing agreement) materials, confidential information and know-how; enabling future development of EvoGenix' IPRs (and a stronger platform for future commercialization initiatives).

**Trademarks:** Value generation through collaboration contract with University of Massachusetts Medical School.

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## EvoGenix

### SUMMARY -

#### HOW HAVE THE IPRs BEEN UTILISED?

The Company has been able to communicate the value of its IPRs in generating in-licensing, out-licensing and cooperative research agreements with internationally recognized brand names.

The Company has been able to build and demonstrate a layer of proprietary protection and barriers to entry via its IPRs.

The Company has been able to utilize its IPRs to further develop its product pipeline to meet current and expected international demand for its products and services.

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## Pharmaxis

Pharmaxis (ASX:PXS, NASDAQ:PXSL) is an Australian pharmaceutical company specializing in the research, development and commercialization of human therapeutic products that address chronic respiratory and autoimmune diseases and the development of improved lung function tests.

Financing (Equity markets) obtained through Series A and B venture capital rounds, issuance of ordinary shares traded on the Australian Stock Exchange (+conversion of redeemable preference shares) and American Depository Shares traded on NASDAQ. No debt on issue.

Grant funding from the Australian Government to cover R&D activities.

Combined Market Capitalisation: \$A571 million (at 30 March 2007). Dual Listing on the Australian Stock Exchange and NASDAQ.

Operating Revenues for FY 2006: Pre-Revenue

IP Focus on Patent portfolio, Know-how and Trade marks.

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# Pharmaxis

## INTELLECTUAL PROPERTY PORTFOLIO

**Patents:** A number of patents developed in-house and licensed focusing on a range of technologies including Pharmaxis' treatments for autoimmune diseases such as multiple sclerosis and rheumatoid arthritis and specific treatments for chronic lung diseases such as asthma and chronic bronchitis.

**Know-how:** Embedded, for instance, within licensing agreements, proprietary R&D, Completion of Phase III clinical trials (and commensurate results), regulatory approvals and knowledge related to a fully integrated manufacturing to sales capability.

**Trademarks:** Mix of protection through registration and in-use trade marks including Aridol™ (for the management of asthma) and Bronchitol™ (for cystic fibrosis and chronic obstructive pulmonary disease).

**Copyright:** Not identified. Copyright will exist in law in databases, etc.

**Designs:** None registered

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# Pharmaxis

## IPRs - USE OF IP IN RAISING FINANCE

### Example 1: Grant Funding - Australian Government

**Patents/Know-how:** Funding provided under the AusIndustry Pharmaceuticals Partnerships Program to complete the R&D necessary to ensure international registration of Aridol, complete the final development of Bronchitol and advance two new therapies for the treatment of multiple sclerosis and rheumatoid arthritis. Total funding - \$A4.5 million.

**Patents/Know-how:** Funding provided under the AusIndustry R&D Start Grant Program for the development of a new treatment for cystic fibrosis. Total funding - \$A3 million.

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# Pharmaxis

## IPRs - USE OF IP IN RAISING FINANCE

### Example 2: Equity Markets Financing - Major Financings

**Venture Capital Round**, August 2002: Funds utilized to continue R&D programs and commence clinical trials of selected products. Major focus, from the IP perspective, on IP protection (via patent portfolio) and Know-how (R&D/process) in addition to the normal requirements (management team, proof of concept, size of market, etc).

**Initial Public Offering**, November 2003: Funds utilized for clinical and pre-clinical development, project commercialization, scale-up of manufacturing capability largely around Bronchitol and Aridol. Major focus, from the IP perspective, on Pharmaxis' patented product portfolio, licences and competitive positioning.

**Secondary Offering - Global Capital Raising**, November 2005: Funds utilized for clinical development of Aridol and Bronchitol products, pre-clinical development of selected product pipeline and expansion of Pharmaxis manufacturing facilities. Major focus, from the IP perspective, on clinical trial results and pre-clinical programs.

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# Pharmaxis

## SUMMARY - HOW HAVE THE IPRs BEEN UTILISED?

The Company has communicated the benefits of the IPRs to the equity markets as part of its successful capital raising activities.

The Company has achieved 'up-rounds' at every major financing stage. Equity markets are rewarding execution of strategy and achievement of milestones, driven, in part, by the successful utilization of the Company's IP.

The Company has been able to generate significant cash on hand (from capital raising activities) to enable continuing development of the Company's IP-focused product pipeline.

The Company has been able to create significant value as evidenced by the Company's market capitalisation to net identifiable assets ratio (implied value of \$A485 million, based on Pharmaxis balance sheet at 31 December 2006).

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# Intangible Assets and IPR Management

Thank You

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# Intangible Assets and IPR Management

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- Mr Huw Jones, CEO, Aeris Technologies
- Dr Alan Robertson, CEO, Pharmaxis
  
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